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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/602,037	06/23/2000	James R. Bortolini	Bortolini 20-13-87-4-27	9055

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EXAMINER	
LEO, LEONARD R	

ART UNIT	PAPER NUMBER
3753	

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/602,037	BORTOLINI ET AL.
	Examiner	Art Unit
	Leonard R. Leo	3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,17-20 and 24-27* is/are pending in the application.

4a) Of the above claim(s) *7-9,17 and 24-27* is/are withdrawn from consideration.

5)☒ Claim(s) *18-20* is/are allowed.

6)☒ Claim(s) *1-5 and 10* is/are rejected.

7)☒ Claim(s) *6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The amendment filed on February 23, 2004 has been entered. Claims 1-10, 17-20 and 24-27 are pending, and claims 7-9, 17 and 24-27 remain withdrawn.

The indicated allowability of claims 1-10 is withdrawn in view of the newly discovered reference(s) to Heady et al. Rejections based on the newly cited reference(s) follow.

Claim Objections

Claim 3 is objected to because of the following informalities:

The recitation of "on" in line 2 should read -- one --.

Appropriate correction is required.

Claim 6 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 18. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 and 10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 10 of U.S. Patent No. 6,304,447 in view of Heady et al.

The patent claims all the claimed limitations of the application except an electromechanical actuator.

Heady et al discloses an electronic assembly comprising a substrate 220 with components 245; and a circulating fluid via electromechanical actuator 150 for the purpose of improving heat exchange.

Since the patent and Heady et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Heady et al would have been recognized in the pertinent art of the patent.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the patent an electromechanical actuator for the purpose of improving heat exchange as recognized by Heady et al.

Claims 4-5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 10 of U.S. Patent No. 6,304,447 in view of Heady et al as applied to claims 1-3 and 10 above, and further in view of Murphy et al.

The combined teachings of the patent and Heady et al lacks a piezoelectric actuator.

Murphy et al discloses a fan comprising a rigid blade 12 and piezoelectric actuator 20 for the purpose of optimizing space and power requirements.

Since the patent and Murphy et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Murphy et al would have been recognized in the pertinent art of the patent.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the patent a piezoelectric actuator for the purpose of optimizing space and power requirements as recognized by Murphy et al.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Heady et al. The recitation of "when liquid is disposed in the compartment" is not a positive limitation, as evidenced by claim 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heady et al in view of Rohner.

Heady et al discloses all the claimed limitations except liquid as the working fluid.

Rohner discloses an electronic assembly comprising a substrate 12 with components 10; and a circulating liquid 44 via pump 32 for the purpose of improving heat exchange.

Since Heady et al and Rohner are both from the same field of endeavor and/or analogous art, the purpose disclosed by Rohner would have been recognized in the pertinent art of Heady et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Heady et al a circulating liquid for the purpose of improving heat exchange as recognized by Rohner.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heady et al in view of Rohner as applied to claims 11-13, 18 and 20 above, and further in view of Murphy et al, as applied in the double patenting rejection above.

Allowable Subject Matter

Claims 18-20 are allowed.

Response to Arguments

Applicants' elected with traverse the species of Figure 6 in Paper No. 4 on February 4, 2002. In the Office action mailed May 20, 2003, claims 7-9 were rejoined based on independent claim 1 containing generic allowable subject matter. However, claim 1 is rejected above and claims 7-9 are withdrawn to the nonelected species.

The rejections in view of Wickelmaier et al are withdrawn.

No further comments are deemed necessary at this time.

Conclusion

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648. Status of the application may also be obtained from the Internet: http://pair.uspto.gov/cgi-bin/final/home.pl

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.

Leonard R Leo

LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3753

April 9, 2004